# Sodium Azide Crystal Violet Blood Agar

**M767**

Sodium Azide Crystal Violet Blood Agar is used for selective cultivation of *Erysipelothrix rhusiopathiae* .

## Composition**

| Ingredients | Gms / Litre |
|---|---|
| Beef heart, infusion from | 500.000 |
| Casein enzymic hydrolysate | 20.000 |
| Sodium chloride | 5.000 |
| Glucose | 0.200 |
| Sodium azide | 0.300 |
| Crystal violet | 0.002 |
| Agar | 15.000 |
| Final pH ( at 25°C) | 7.0±0.2 |

**Formula adjusted, standardized to suit performance parameters

## Directions

Suspend 50.5 grams in 950 ml distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 50°C and aseptically add 5% v/v sterile defibrinated blood. Mix well and pour into sterile Petri plates.

Warning: Sodium azide has a tendency to form explosive metal azides with plumbing materials. It is advisable to use enough water to flush off the disposables.

## Principle And Interpretation

Sodium Azide Crystal Violet Blood Agar is prepared based on the formula described by Packer (1) for selective cultivation of *Erysipelothrix rhusiopathiae* . It can also be used for the isolation of Streptococci especially *Streptococcus pneumoniae* .

Beef heart infusion and casein enzymic hydrolysate provide the necessary nitrogenous compounds and other essential nutrients to the organisms. Glucose is the fermentable carbohydrate source in the medium but is weakly fermented by *Erysipelothrix rhusiopathiae* without the gas production. Crystal violet and sodium azide inhibit most of the gram-positive and gram-negative bacteria respectively (2). Blood provides the growth factors and also aid to detect the haemolytic reaction if any. Sodium chloride maintains the osmotic balance of the medium.

## Quality Control

**Appearance**
Light yellow coloured with purple tinge homogeneous free flowing powder

**Gelling**
Firm, comparable with 1.5% Agar gel

**Colour and Clarity of prepared medium**
Basal Medium yields purple coloured clear to slightly opalescent gel. With addition of blood, reddish purple coloured opaque gel forms in petri plates.

**Reaction**
Reaction of 5.05% w/v aqueous solution at 25°C. pH : 7.0±0.2

**pH**
6.80-7.20

**Cultural Response**
M767: Cultural characteristics after 18 - 24 hours at 35 - 37°C with 5-10% CO2 or after 48 hours at 35°C, in an anaerobic atmosphere.

| Organism | Growth |
|---|---|
| **Cultural Response** | |

| | |
|---|---|
| *Escherichia coli ATCC 25922* | inhibited |
| *Erysipelothrix rhusiopathiae ATCC 19414* | good-luxuriant |
| *Proteus mirabilis ATCC 25933* | inhibited |
| *Streptococcus pneumoniae ATCC 6303* | good-luxuriant |
| *Staphylococcus aureus ATCC 25923* | inhibited |

## Storage and Shelf Life

Store below 30°C in tightly closed container and the prepared medium at 2 - 8°C. Use before expiry date on the label.

## Reference

1. Packer R.A., 1943, J. Bact., 46 : 343.
2. MacFaddin J., 1985, Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol. I, Williams and Wilkins, Baltimore.

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